1/2   014   UNCLASSIFIED   PROCESSING DATE--30OCT70
TITLE--PRODUCTION OF A NEW ANTIBIOTIC, CHALCIDIN BY MICROMONOSPORA CHALCEA
  -U-
AUTHOR-(05)-GAUZE, G.F., BRAZHNIKOVA, M.G., SHORIN, V.A., MAKSIMOVA, T.S.,
  CLKHCVATOVA, O.L.
COUNTRY OF INFO--USSR

SOURCE--ANTIBIUTIKI, 1970, VOL 15, NR 6, PP 483-486

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--STAPHYLOCOCCUS INFECTION, ANTIBIOTIC, SOIL BACTERIOLOGY,
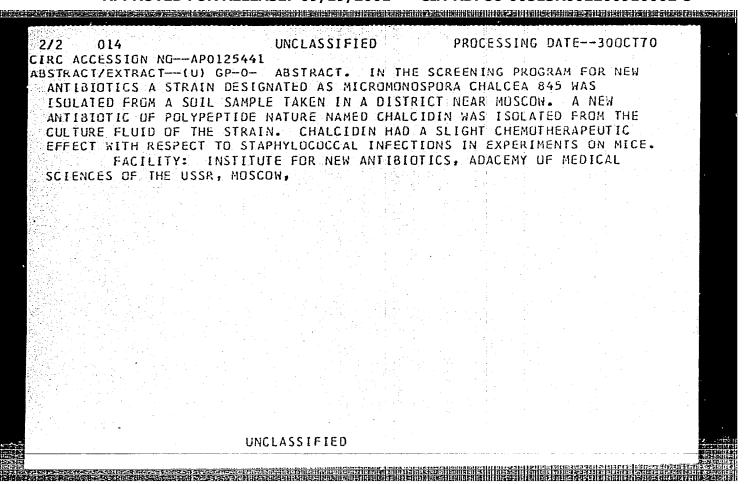 MOUSE/(U)CHALCIDIN ANTIBIOTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1830   STEP NO--UR/0297/70/015/006/0483/0486

CIRC ACCESSION NO--AP0125441
                         UNCLASSIFIED

CIRC ACCESSION NO--AP0125441
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE SCREENING PROGRAM FOR NEW
ANTIBIOTICS A STRAIN DESIGNATED AS MICROMONOSPORA CHALCEA 845 WAS
ISOLATED FROM A SOIL SAMPLE TAKEN IN A DISTRICT NEAR MOSCOW. A NEW
ANTIBIOTIC OF POLYPEPTIDE NATURE NAMED CHALCIDIN WAS ISOLATED FROM THE
CULTURE FLUID OF THE STRAIN. CHALCIDIN HAD A SLIGHT CHEMOTHERAPEUTIC
EFFECT WITH RESPECT TO STAPHYLOCOCCAL INFECTIONS IN EXPERIMENTS ON MICE.
     FACILITY: INSTITUTE FOR NEW ANTIBIOTICS, ADACEMY OF MEDICAL
SCIENCES OF THE USSR, MOSCOW,

UNCLASSIFIED

Acc. Nr:
AP0034405

A NEW SPECIES OF MICROMONOSPORA PRODUCING
MANNOSIDOSTREPTOMYCIN

Gauze, G. F.; Brazhnikova, M. G.; Sveshnikova, M. A.;
Ukholina, R. S.; Nechayeva, N. P.

Institute for New Antibiotics, Academy of Medical Sciences of the USSR, Moscow

Two cultures (1570 and 1575) of Micromonospora were isolated from a sample of tropical soil. The stains are described as a new species designated as Micromonospora pallida sp. nov. M. pallida differs from other species by the absence of the mycelium coloration and an ability to form well developed non-sporulating aerial mycelium on certain media. Antibiotic mannosidostreptomycin was isolated from the culture fluid of strain 1575.

D.R.

6

REEL/FRAME
19711065

USSR   UDC: 612.822.3

DUDKIN, K. N., GAUZEL'MAN, V. Ye., Laboratory of Vision Physiology,
    Institute of Physiology imeni I. P. Pavlov, Academy of Sciences
    USSR, Leningrad

"Registration and Discrimination of Responses to Initiation and Termi-
nation of a Stimulus in the Pulsed Activity of Neurons"

Abstract: The paper describes electronic instruments designed for re-
cording and distinguishing on- and off-responses. Schematic diagrams
are given for two devices. The first is a unit for mixing the investi-
gated pulse flow (information carrier) with markers for the beginning
and end of the stimulus. The resultant mixture can be recorded on a
single-channel tape recorder. The other device is a unit for selecting
signals in pulse processes. This instrument discriminates signals for
stimulus actuation in the studied pulse stream. The proposed equipment
can be used in conjunction with digital computers.

1/1

Acc. Nr: AP0049945
Abstracting Service: CHEMICAL ABST. 5-70
Ref. Code: UR 0068

101893k Use of clear indene-coumarone resins as corrosion-resistant coatings. Andrianov, E. G.; Matveeva, I. E.; Gavaza, V. S. (Zhdanov. Koksokhim. Zavod. Zhdanov, USSR). Koks Khim. 1970, (1), 47-9 (Russ). Mixts. of indene-coumarone resin (I) with ED-6 (epichlorohydrin-diphenylolpropane epoxy resin) gave excellent coatings for metals. The typical coating formulation contained I 22.5, ED-6 22.5, ligroine 47.0, PhMe 4.0, and acetone 4.0 parts. The formulation, with or without a pigment, applied to steel precoated with an antirust compn. (soln. of powd. Zn in 40% H_3PO_4), dried in 24 hr at 20° and had 50 kg/cm impact resistance and satisfactory hardness. The coating resisted the atm. conditions of a coking plant, and resisted aq. 10-15% NaOH at 25-30°, 1-10% NaCNS, 1-10% H_2SO_4, and hot plant water. Less expensive formulations contg. a 2:8 or 3:7 wt. ratio of ED-6 to I can be used in less crit. applications.   CPJR

REEL/FRAME
19801881

7

USSR

UDC 535.376:621.382

KHOKHLACHEV, K.I., GAVANIN, V.A., KRUGLOV, I.I., BEKHTINA, A.B.

"Pulsed Photometric Parameters Of Light-Emitting Diodes"

V sb. Impul's. fotometriya (Pulse Photometry--Collection Of Works), Issue 2, Leningrad, "Mashinostroyeniye," 1972, pp 147-152 (from RZh:Elektronika i yeye primeneniye, No 9, Sept 1972, Abstract No 9B312)

Translation: Information is furnished on native light-emitting diodes, apparatus is described, and the results are presented of a measurement of the peak value of the radiant intensity of light-emitting diodes and the stability of the peak value of the emission pulses of GaP light-emitting diodes during continuous operation. 4 ill. 2 tab. Summary.

1/1

- 111 -

USSR   UDC: 621.385:530.145.6:623

SEMENOV, A. A., ARSEN'YAN, T. I., GAVASHVILI, G. V., GORDEYEV, A. N.

"Statistical Characteristics of Random Fading of Coherent Optical Emission During Propagation in the Troposphere"

V sb. Radiofiz. i rasprostr. elektromagnitn. voln (Radio Physics and Propagation of Electromagnetic Waves--collection of works), Moscow, 1970, pp 77-91 (from RZh-Radiotekhnika, No 11, Nov 70, Abstract No 11D568)

Translation: A brief survey is given of important theoretical and experimental works on propagation of coherent optical emission in the troposphere. Experiments are described on measuring the statistical characteristics of coherent emission signals on an actual communications line 4.9 km long as compared with the meteorological parameters which characterize the route (temperature, humidity, wind speed). A laser with $\lambda = 6328$ Å was used. The statistical characteristics were calculated on a digital computer. It is found that there are three types of fading, just as in the case of ultrashort-wave propagation (slow shallow, standard, and a slow component plus rapid fading). Time autocorrelation functions are found as well as the radii of time autocorrelation. Seven illustrations, bibliography of fourteen titles. N. S.

1/1

USSR   UDC 624-436

GAVELYA, S.P., Dnepropetrovsk

"Calculation of Stress-Strain State of Toroidal Shell With Holes"

Kiev, Prikladnaya Mekhanika, Vol 9, Vyp 2, Feb 73, pp 3-11

Abstract: The coefficients of differential equations defining the elastic equi-
librium of shells of revolution depend on the meridional coordinates. This
complicates the determination of Green matrix used to solve these equations.
In this article it is shown how the solution can be obtained by use of computer.
A closed toroidal shell with holes is solved as an example. Figures show the
deflections in the vicinity of the holes for the cases of holes located along the
equator on the outside and on the inside of the toroid. The distribution of hoop
stresses is shown by contour lines on another set of figures. The deflections
decrease rapidly with the distance from the holes. The accuracy of the accumula-
tion results is estimated at 2%.

1/1

USSR   UDC 8.74

GAVICH, V. G.

"Consideration of the Restrictions Imposed by the Technical Implementation of Inputting Constructed Responses"

Tr. Mosk. energ. in-ta (Works of Moscow Power Engineering Institute), 1972, vyp. 82, pp 116-123 (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V629)

Translation: A study was made of the following problem. There are t questions and for any of them $\ell = 1, 2, \ldots, t$, a random set of response elements is given -- $\{p_1, p_2, \ldots, p_n\}_\ell$. Any specific response is given by the ordered sequence of elements $\{p_{i1}, p_{i2}, \ldots, p_{im}\}_{\ell ku}$ $m \leq n$; $\ell = 1, 2, \ldots, t$, $k = 1, 2, \ldots, s$, $u = 1, 2, \ldots, w$ (where ℓ is the number of the question; m is the number of the response elements used; s is the number of different characteristic responses; k is the number of the characteristic response; w is the number of indifferent forms of the defined characteristic response; u is the number of the indistinguishable form of the response). It is necessary to define a class of problems which can be realized by the training device considering the technical realization of input of constructed responses. An example of solving this problem is presented.
1/1

- 72 -

USSR

GAVIDULLIN, R. M., YAKUSHEV, V. A., BOKATUYEVA, T. A., and UVAROVA, T. A.,
Moscow Aviation Technological Institute, Chair of the Science of Metals and
of the Heat Treatment of Metals

"Kinetics of Hydrogen Redistribution in Aluminum in the Process of Heat
Treatment"

Abstract: The duration of establishing the thermodynamic equilibrium between
the hydrogen concentration in the Al solid solution and its pressure in the
pores was calculated with the help of a hydraulic integrator assuming a con-
tinuous distribution of pores in the metal and an initial pore radius of
$5 \cdot 10^{-6}$ cm. Derived formulas were used for the determination of the incubation
and the growing period of pores. The time-dependent relative change of the
pore radius is shown. For the investigated conditions of heat treatment at
$400-600^\circ$, the duration of equilibrium achievement does not exceed two seconds.
The principal growing process of pores at heat treatment proceeds by the coale-
scence mechanism. The short period of hydrogen redistribution is of particular

1/2

USSR

GABIDULLIN, R. M., et al., Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, No 6, 1973, pp 114-119

use in specifying the mechanism of the development of internal defects in deformed aluminum alloys. Two figures, two bibliographic references, 16 formulas.

2/2

- 2 -

USSR   UDC 537.56.533.7

GAVIN, L. B., LUN'KIN, Yu. P., Leningrad

"Flow a Non-Equilibrium Ionized Radiating Gas Around a Body Considering the
Temperature Difference Between Electrons and Ions"

Zhurnal Prikladnoy Mekhaniki i Tekhnicheskoy Fiziki, No 1, 1972, pp 9-14.

Abstract: The flow is studied along the zero flow line during hypersonic
flow around an axisymmetrical blunt body by a stream of a non-equilibrium
ionized, monatonic, non-viscous radiating gas considering the difference
in temperatures between the electron and atom-ion gases. The excitation
of atoms due to collisions with the electrons and their subsequent ioniza-
tion are considered, as well as photo ionization. Since the separation of
the shockwave is slight in comparison to the characteristic size of the
body, the radiative transfer equation is written in the approximation of a
locally homogeneous flat layer. The influence of parameters of the inci-
dent stream on the field of flow across the shockwave and the distribution
of radiation heat flux is studied.

1/1

USSR   UDC: 553.981:551.24(575.4)

GAVRILOV, V. P., Institute of Geology, Ashkhabad

"Prospecting for Large Structures in Fault-Vicinity Zones of Turkmenia in Connection With an Increase of Efficiency in Prospecting for Oil and Gas"

Ashkhabad, Izvestiya Akademii Nauk Turkmenskoy SSR. Seriya Fiziko-Tekhnicheskikh, Fizicheskikh Nauk, No 1, 1972, pp 116-118

Abstract: An important part in the formation of local uplifts of young platforms are movements along regional faults. In fault-vicinity areals up to 20 km wide are concentrated the anticlines of largest size and of greatest amplitude, which contain 3-4 times more oil or gas than do structures in regions beyond the limits of these areals. Within the limits of the platform part of the Turkmenskoy SSR, regional structure-forming faults are the Tedzhen-Pitnyakskiy, the Kirpichlinskiy, the Uchadzhinskiy, the Badkhyz-Karabil'skiy, and others. The primary objects of prospecting and reconaissance for oil and gas are the following large structures: Gagarinskaya, Yuzhno-Unguzskaya, Kirpichlinskaya, Uchadzhinskaya, Tangilkudukskaya, Kulachskaya, and others. 1 figure.

1/1

- 104 -

GAVRA, T. D., SHABANOV, Yu. V., Active Members of the Scientific and Technical
Society of Radio Engineering, Electronics and Communications imeni A. S. Popov

"A Transistorized Quartz-Crystal VHF Oscillator With High Mode Frequency
Stability"

Abstract: The authors investigate the possibility of improving the mode fre-
quency stability of VHF oscillators. An optimum circuit for 100 MHz with
transistor in a common-base hook-up and quartz crystal in the feedback circuit
was studied. Methods of measuring the mode frequency stability are presented,
and the effect of circuit elements and supply conditions on frequency stability
is discussed. The experimental studies showed that substitution of elements
of the same type for the active and passive elements in VHF quartz-crystal
oscillators does not change the operating conditions. Comparatively low-
frequency transistors can be used for self-compensating operation, which re-
quires special selection of the operating point. A mode frequency stability
of about $2 \cdot 10^{-7}$ can be achieved by using rf transistors in the simplest
crystal-controlled harmonic oscillator circuits. Amplifier circuits and
automatic amplitude control systems have no adverse effects on the mode fre-
quency stability of the oscillator. The mode frequency stability of the os-
cillator can be improved to $(1-2) \cdot 10^{-8}$ by using simple compensation circuits.
1/1

USSR   UDC 621.789-977:669.15-194.3

GAVRANEK, V. V. and FILIPPOVA, Z. K., Khar'kov Polytechnic Institute

"Stability of the Effect of HTSH on the Properties of 1Kh12VNMF Steel"

Moscow, Metallovedeniye i termicheskaya obrabotka metallov, No 2, 1972,
pp 34-36

Abstract: A study has been made of the stability of the effect of high-
temperature strain hardening (HTSH) -- under optimum specifications -- on
the properties of 1Kh12VNMF steel after tempering to 200-700°C and repeated
hardening. The chemical composition of the test steel was: 0.16% C;
11.68% Cr; 0.60% Ni; 0.70% Mo; 0.30% V; 1.0% W; 0.62% Mn; 0.32% Si;
0.20% S and 0.025% P. The increased mechanical properties of 1K12VNMF
steel as a result of HTSH are retained up to high tempering temperatures
as well as after repeated heat treating. Application of HTSH and tempering
at 200°C to the steel increases its erosion resistance more than five-fold
as compared to that following conventional treatment -- temper hardening
at 680°C. HTSH with repeated hardening is recommended for machinable parts
from 1Kh12VNMV steel. (2 illustrations, 2 tables, 3 bibliographic
references).

1/1

1/2   042   UNCLASSIFIED   PROCESSING DATE--27NOV70
TITLE--FORMATION OF INDIVIDUAL REGIONS OF DAMAGE ON THE SURFACE OF A METAL
 AS A RESULT OF THE COLLAPSE OF CAVITATION BUBBLES -U-
AUTHOR-(02)-GAVRANEK, V.V., ZOZULYA, V.F.

COUNTRY OF INFO--USSR

SOURCE--FIZ. KHIM. MEKHAN. MAT., 1970, 6, (1), 46-49

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--METAL SURFACE PROPERTY, CAVITATION, ULTRASONIC VIBRATION,
 EROSION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1817   STEP NO--UR/0369/70/006/001/0046/0049

CIRC ACCESSION NO--AP0129185
                     UNCLASSIFIED

CIRC ACCESSION NO--AP0129185
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF COLLAPSING
  CAVITATION BUBBLES ON THE SURFACE OF A METAL IS DISCUSSES WITH SPECIAL
  REF. TO THE CASE IN WHICH THE CAVITATION IN THE LIQUID MEDIUM IS
  PRODUCED BY ULTRASONIC VIBRATIONS. THE COLLAPSE OF THE CAVITATION
  BULLBES TAKES PLACE IN SEVERAL STAGES, AND EACH OF THESE LOAD THE
  SURFACE OF THE METAL IN A CHARACTERISTIC MANNER AND CREATE LOCAL REGIONS
  OF DAMAGE. THE ACTUAL FORM OF THE DAMAGE IS VERY COMPLICATED AND
  DEPENDS ON THE POSITION OF THE CAVITATION BUBBLE RELATIVE TO THE SURFACE
  OF THE METAL AT THE INSTANT OF COLLAPSE.

UNCLASSIFIED

USSR   UDC 771.553:771.537.61

GAVRIK, V. V., GOROKHOVSKIY, Yu. N., and DAVYDKIN, I. M.

"Analytic Expression of the Frequency-Contrast Function of Photographic
Materials"

Abstract: On the basis of the study of a large volume of experimental results
by the method of principal components, it was established that the frequency-
contrast functions of black and white photographic materials can be described,
with a mean-square error of less than 0.01, by the expansion $T = a + b (e^{-kn\nu} - 1$,
where T is the coefficient of contrast transfer, while nu is the space fre-
quency in mm^{-1}. It is shown that the basic differences of frequency-contrast
functions are caused predominantly by changes of a parameter of this expres-
sion, namely K, which apparently characterizes the light-dispersion charac-
teristics in the emulsion layer. Of the two other parameters, b apparently
accounts for the influence of reflex halation. Possible causes of appearance
of the variable parameter a are discussed. For a single-parameter description
of the frequency-contrast function with a mean square error of about 2 mm^{-1}
within the interval of values of the contrast transfer coefficient from 0.2
to 0.9, the function nu ≈ -K lg(0.88 T -- 0.062) is proposed. 2 tables, 3
figures, 23 references.
1/1

TITLE--A PHOTODOSIMETER FOR TECHNICAL PHOTOMETRIC MEASUREMENTS -U-

AUTHOR-(03)-GAVRIK, V.V., GOROKHOVSKIY, YU.N., FREYVERT, A.M.

COUNTRY OF INFO--USSR

SOURCE--LENINGRAD, OPTIKO-MEKHANICHESKAYA PROMYSHLENNOST', NO 2, FEB 70,
   PP 25-29
DATE PUBLISHED----FEB70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--PHOTOMETER, RADIATION INTENSITY, DOSIMETER, ILLUMINATION,
   OPTIC MEASUREMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/1581   STEP NO--UR/0237/70/000/002/0025/0029

CIRC ACCESSION NO--AP0118564
                         UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0118564

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. A DESCRIPTION IS GIVEN OF A SMALL SIZE DEVICE INTENDED FOR TECHNICAL PHOTOMETRIC MEASUREMENTS OVER A WIDE RANGE OF LIGHT FLUXES (10 PRIME6) AT MAXIMUM ILLUMINATION AND BRIGHTNESS (100,000 1X AND 20,000 NIT) INSTEAD OF A PHOTOMETER BENCH AND INDUSTRIAL CONTROL ADJUSTING DEVICES. RETICULATE ATTENUATORS OF LIGHT USED IN THIS PHOTODOSIMETER ARE SPECTRALLY NONSELECTIVE AND ARE DISTINGUISHED BY THE LONGEVITY.

UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--27NOV70

1/2   015
TITLE--REMOVAL OF METALLIC MERCURY FROM WORKING AREAS -U-

AUTHOR-(02)-GAVRIKOV, L.A., GOLUBEV, V.G.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 266,727
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE, ZNAKI 1970,
DATE PUBLISHED--01APR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--MERCURY, CHEMICAL PATENT, HYDROGEN PEROXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/1076   STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0130111
                          UNCLASSIFIED

2/2   015   UNCLASSIFIED   PROCESSING DATE--27NOV70
CIRC ACCESSION NO--AA0130111
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. METALLIC HG WAS REMOVED WITH A
DEGASSING AGENT, SUCH AS AN AQ. $H_2 O_2$ SOLN., TO ELIMINATE THE
USE OF TOXIC OR CORRODING SUBSTANCES.

UNCLASSIFIED

USSR   UDC 534.26:534.222.2

GAVRIKOV, V. K. and LUKASHOVA, N. V., Institute of Radiophysics and Electronics, Ukrainian SSR Academy of Sciences

"Forced Sound Dispersion on the Surface of a Liquid"

Abstract: Two nonlinear effects on the interface of liquids are dealt with theoretically: the generation of surface oscillations during the mixing of three-dimensional sound waves, and forced sound dispersion on the surface of the waves. An investigation is made of the relationship of the threshold of forced dispersion to the pulse duration and the dimension of the sound spot. It is shown that along with the threshold of instability with respect to the excitation of surface oscillations at small pulse durations, (and small beam apertures), an observation threshold exists, which is determined by the pos- sibilities of the registration of dispersed sound. Numerical evaluations are presented, which indicate the possibility of experimental detection of the discussed effects. 1 figure. 8 references.

1/1

TITLE--STIMULATED SCATTERING OF LIGHT BY SURFACE WAVES -U-

AUTHOR-(03)-GAVRIKOV, V.K., KATS, A.V., KONTOROVICH, V.M.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58,
  NR 4, PP 1318-1331
DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LIGHT SCATTERING, SURFACE WAVE, CRYSTAL SURFACE,
  INCOMPRESSIBLE FLUID, LIGHT PULSE, LIGHT POLARIZATION
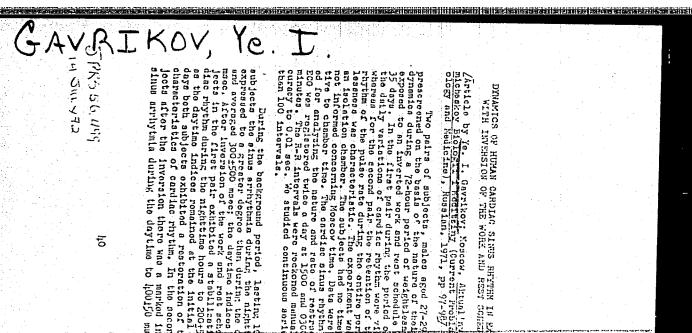

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/1491   STEP NO--UR/0056/70/058/004/1318/1331

CIRC ACCESSION NO--AP0106247
                        UNCLASSIFIED

GAVRIKOV, Ye. I.

PK5 56/55
14 Suy 72

10

DYNAMICS OF HUMAN CARDIAC SINUS RHYTHM IN EX
WITH INVERSION OF THE WORK AND REST SCHED

/Article by Ye. I. Gavrikov, Moscow, Aktualny
Nicheskoy Biologii i Meditsiny (current problem
ology and Medicine), Russian, 1971, pp 91-98/

Two pairs of subjects, males aged 27-29
prescreened on the basis of the nature of their
dynamics during a 72-hour period of weightless
exposed to an inverted work and rest schedule
35 days. In the first pair during the period o
the only variations of cardiac rhythm were vi
wherein for the second pair, the retention of t
rhythm of the pulse rate during the entire per
lessness was characteristic. The experiment wa
an isolation chamber. The subjects had no time
not informed concerning Moscow time. Data were
tive to chamber time. The cardiac sinus rhythm
ed for analyzing the nature and rate of restru
ECG was registered twice a day at 1500 and 030
minutes. The R-R intervals were reckoned manua
curacy to 0.01 sec. We studied continuous aort
than 100 intervals.

During the background period, lasting 1
subjects the sinus arrhythmia during the night
exposed to a greater degree than during the
and averaged 300+500 msec; the daytime indices
msec. After inversion of the work and rest sch
jects in the first pair exhibited a stabilizati
diac rhythm during the nighttime hours to 200+
as the daytime indices remained at the initial
days both subjects exhibited a restoration of
characteristics of cardiac rhythm. In the seco
jects after the inversion there was a marked in
sinus arrhythmia during the daytime to 400+50 m

CIRC ACCESSION NO--AP0106247
ABSTRACT/EXTRACT--(U) GP-0-   ABSTRACT.   STIMULATED SCATTERING BY CAPILLARY
WAVES ON THE SURFACE OF AN INCOMPRESSIBLE FLUID OR BY RAYLEIGH WAVES ON
THE SURFACE OF AN ISOTROPIC SOLID BODY WITH SMALL OPTICOELASTIC MODULII
IS INVESTIGATED. BOTH LONG AND SHORT PULSES ARE INVESTIGATED, AND IT IS
SHOWN THAT THE THRESHOLD APPRECIABLY DEPENDS ON THE PULSE DURATION.
CASES OF BOTH LOW AND HIGH TEMPERATURES ARE CONSIDERED FOR SCATTERING BY
RAYLEIGH WAVES.   THE DEPENDENCE OF THE STIMULATED SCATTERING THRESHOLD
ON THE ANGLE OF INCIDENCE AND POLARIZATION OF THE INCIDENT LIGHT AND
PROPERTIES OF THE SCATTERED RADIATION NEAR THE THRESHOLD ARE ANALYSED.
THE APPROVED FOR RELEASE 09/19/2001 CIA-RDP86-00513R002200910002-5"
DISCUSSED.   FACILITY: INST. RADIOFIZIKI I ELEKTRONIKI, AN UKR.
SSR.

Entomology

USSR   UDC 595.775

GERASIMOVA, N. G., and GAVRIKOVA, Ye. A., Guryevsk Antiplague Station

"The Lifespan of Xenopsylla skrjabini Ioff and Xenopsylla nuttalli Ioff Fleas"

Leningrad, Parazitologiya, Vol 4, No 4, Jul/Aug 70, pp 385-388

Abstract: Experimental data are presented on the effect of temperature and relative humidity on the lifespan of X. skrjabini and X. nuttalli. Survival of the fleas was studied over the temperature range from 8 to 34°C at relative humidities ranging from 35 to 92%. It was found that the lifespans were shortened with increasing temperature and decreasing humidity. Female species outlived male species. The lifespan of X. nuttalli was much shorter than that of X. skrjabini; 50% of the latter species survived at low temperatures (8-17°C) for 6-7 months (some individuals survived for more than a year). At a temperature of 20-24°C, they survived for 1.5 to 2 months (some individuals, up to 6 months). Regularly fed fleas of the X. nutalli species, on the other hand, survived temperatures of 8-17°C for only 3.5-5 months (some individuals, 8 months) and temperatures of 20-24°C for up to 1 month (some individuals, more than 6 months).

1/1

1/2   010   UNCLASSIFIED   PROCESSING DATE--30OCT70

TITLE--IMPROVED METHOD FOR PREPARING A CATALYST FOR THE VAPOR PHASE
    SYNTHESIS OF VINYL CHLORIDE -U-

AUTHOR-(05)-PANFILOV, A.A., VASILYEVA, I.B., KAMENKO, B.L., GAVRILCHUK,
    N.M., KVARTALNOV, V.V.

COUNTRY OF INFO--USSR

SOURCE--KHIM. PROM. (MOSCOW) 1970, 46(3), 177-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CATALYTIC ORGANIC SYNTHESIS, VINYL CHLORIDE, MERCURY COMPOUND,
    ACTIVATED CARBON, CHLORINATION, ACETYLENE, CATALYST ACTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1662   STEP NO--UR/0064/70/046/003/0177/0179

CIRC ACCESSICN NO--AP0125284
                    UNCLASSIFIED

CIRC ACCESSION NO--AP0125284
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADSORPTION ISOTHERM OF HGCL
SUB2 FROM AQ. SCLNS. ON ACTIVATED C IS PRACTICALLY LINEAR AND THE HGCL
SUB2 CONCN. ON THE C INCREASES FROM 0 TO 17PERCENT WHEN THE INITIAL HGCL
SUB2 IN THE SCLN. IS INCREASED FROM 0 TO 5PERCENT (AT 20DEGREES); THE
ADSORPTION IS FAIRLY RAPID AND A STEADY STATE IS ESTABLISHED AFTER
SIMILAR TO 1 HR. A CATALYST CONTG. 10PERCENT HGCL SUB2 WAS PREPD. BY
PASSING A 3PERCENT AQ. SOLN. OF HGCL SUB2 THROUGH A COLUMN PACKED WITH
ACTIVATED C, AND DRYING THE PRODUCT IN CONTACT WITH AIR HEATED TO
120DEGREES. IN THE HYDROCHLORINATION OF C SUB2 H SUB2 AT A C SUB2 H
SUB2:HCL VOL. RATIO OF 1:1.3 AND 180DEGREES THE ACTIVITY OF THE CATALYST
INCREASED GRADUALLY WITH TIME AND THE MAX. ACTIVITY WAS REACHED AFTER
120 DAYS (AT A FLOW RATE OF 1100 VOLS.-HR); THE MAX. ACTIVITY WAS THEN
SUSTAINED FOR UP TO 8 MONTHS, AND THE DEGREE OF CONVERSION OF C SUB2 H
SUB2 UNDER THOSE CONDITIONS WAS NEARLY 80PERCENT.

UNCLASSIFIED

USSR   UDC 546.185

BODNARCHUK, N. D., GAVRILENKO, B. B., and DERKACH, the late G. I., Institute
of Organic Chemistry, Academy of Sciences Ukrainian SSR

"Phosphapyrimidine Derivatives"

Abstract: 1,1,3-Trichloro-4-cyano-5-trichloro(dichloro)methyl-1-phosphapyri-
midines (I) react with aliphatic amines to give mono-, di- or triamino-substi-
tuted phosphapyrimidine derivatives depending on the basicity, structure and
quantity of the amine. Heating of I with aromatic amines gives only monoamino
derivatives regardless of the quantity of the amine. The interaction of I
with alcohols and phenols gives trialkoxy(aroxy) phosphapyrimidine derivatives.
Preliminary biological tests of the phosphapyrimidines showed high antimycotic
activity, particularly in the case of those containing halide atoms in the
benzene rings.

1/1

USSR   UDC 546.185

BODNARCHUK, N. D., GAVRILENKO, B. B., and DERKACH, the late G. I.,
Institute of Organic Chemistry, Academy of Sciences Ukrainian SSR

"Phosphorylation of Enamines with Methyltetrachlorophosphorus and Diphenyl-
trichlorophosphorus"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 7, Jul 70, pp 1469-1473

Abstract: Enamines readily react with methyltetrachlorophosphorus and
diphenyltrichlorophosphorus to give substituted methyldichloro- and diphenyl-
chlorophosphazoethylenes. The latter are also obtained from the interaction
of N,N-dichloroenamines with methyldichlorophosphine and diphenylchlorophosphine.
Chlorophosphazoethylenes react with amines to give anilides.

1/1

UNCLASSIFIED   PROCESSING DATE--13NOV70
TITLE--VACUUM DISTILLATION RESIDUES OF KACHANOVSKII DEPOSIT CRUDE OIL FOR
   THE PRODUCTION OF ROOFING ASPHALTS -U-
AUTHOR-(03)-GAVRILENKO, I.G., BODAN, A.N., KOSTYUK, B.L.

COUNTRY OF INFO--USSR

SOURCE--NEFT. GAZOV. PROM. 1970, (1), 37-40

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ASPHALT, CRUDE OIL, PETROLEUM DEPOSIT, VACUUM DISTILLATION,
   CONSTRUCTION MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/1968   STEP NO--UR/0513/70/000/001/0037/0040

CIRC ACCESSION NO--AP0133812
                    UNCLASSIFIED

CIRC ACCESSION NO--AP0133812
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. VACUUM DISTN. RESIDUES B. LARGER
THAN 400, 440, AND 490DEGREES WERE TESTED AS FEEDSTOCKS FOR THE PREPN.
OF ROOFING ASPHALTS. BY LOW TEMP. OXIDN. WITHOUT COMPRESSION AT
200-250DEGREES, IT WAS POSSIBLE TO PRODUCE IN A PILOT PLANT ACCEPTABLE
MATERIALS FROM THE THREE RESIDUES TESTED. THE PROPERTIES OF THE FINAL
ASPHALTS ARE TABULATED.

UNCLASSIFIED

USSR

DOKUKINA, G. A., KASHENTSEV, M. K., and GAVRILENKO, N. G.

"The Effect of Industrial Noise on the Organism"

Aktualn. probl. professionaln. patologii. Resp. Mezhved. sb (Current Pro-
blems in Occupational Pathology. Republic Interdepartmental - collection of
works), 1970, No 1, pp 107-111 (from RZh-Biologiya, No 1, Jan 71, Abstract
No 1P996)

No Abstract

USSR   UDC 621.383:546.48'23

GAVRILENKO, N. V., KLOCHKOV, V. P., SVECHNIKOV, S. V., and TORCHUN, N. M., In-
stitute of Semiconductor, Academy of Sciences Ukrainian SSR

"Photoelectric Properties of Epitaxial Layers of CdS$_x$·Se$_{1-x}$"

Moscow, Izvestiya Akademii Nauk SSSR -- Neorganicheskiye Materialy,
Vol 6, No 10, Oct 70, pp 1787-1791

Abstract: The article describes results of a study of the photoelec-
tric and electric properties of photosensitive layers of CdS$_x$·Se$_{1-x}$
solid solutions (x = 1, 0.9, 0.7, 0.5, 0.3, 0.1) 5-20 microns thick,
obtained by deposition from a molecular beam in a vacuum of the order
of $5 \cdot 10^{-5}$ torr. Electron-diffraction and X-ray studies showed that at
substrate temperatures of 350-420° C single-phase monocrystalline lay-
ers of CdS, CdS$_x$·Se$_{1-x}$, CdSe with photocurrent maximums in the 510-720
nm region grow on mica. It was found that there is practically no dif-
ference between the photoelectric and electric parameters of the single-
crystal layers and those of volume single crystals of the solid solu-
tions.

1/1

1/2   008   UNCLASSIFIED   PROCESSING DATE--30OCT70

TITLE--SYNTHESIS OF BRANCHED SUGARS WITH OLEFIN BONDING -U-

AUTHOR-(04)-ZHDANOV, YU.A., UZLOVA, L.A., LESKINA, L.P., GAVRILENKO, O.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(3), 666-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SACCHARIDE, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/2001   STEP NO--UR/0079/70/040/003/0666/0669

CIRC ACCESSION NO--AP0127396
                        UNCLASSIFIED

CIRC ACCESSICN NO--AP0127396
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. KETO-L-SORBCSE PENTAACETATE (I)
AND PH SUB3 P:CHAC HEATED 20 HR IN C SUB6 H SUB6 GAVE
4,ACETOXYMETHYL,5,6,7,8,TETRA-O-ACETYL,3,4,DIDEHYDRO,1,3,4,
TRIDEOXY-L-XYLO-OCTULOSE, A SYRUP. SIMILAR REACTION WITH PH SUB3 P:CHB2
GAVE 3,ACETOXYMETHYL,4,5,6,7,TETRA-O-ACETYL,1,C,PHENYL,
2,3,DIDEHYDRO,2,3,DIDEOXY-L-XYLO-HEPTULOSE, A SYRUP, (ALPHA) PRIME20
SUBD MINUS 10.8DEGREES. SIMILARLY WAS PREPD. ITS 1,C-P-ANISYL ANAOLG
(I), A SYRUP, (ALPHA) PRIME20 SUBD MINUS 14.7DEGREES;
2,4,DINITROPHENYLHYDRAZONE M. 171-3DEGREES.   I AND PHNHNH SUB2 HEATED 1
HR IN ACOH GAVE 71PERCENT 3,P-ANISYL,
1,PHENYL,5,(L-XYLO,1,2,3,4,TETRAACETOXYBUTYL),2,PYRAZOLINE, A SYRUP.
HEATING KETO-L-SORBOSE WITH PH SUB3 P:CHCO SUB2 ME IN CHCL SUB3 17 HR
GAVE 21PERCENT ME 3,ACETOXYMETHYL,4,5,6,7,TETRA-O-ACETYL,
2,3,DIDEOXY,2,3,DIDEHYDRO-L-XYLO-HEPTONATE, SYRUP, (ALPHA) PRIME20 SUB3
MINUS 12.2DEGREES. 2,3,4,5,DI-O-ISOPROPYLIDENE-ALDEHYDO-L-ARABINOSE AND
PH SUB2 P:CICO SUB2 ME)CH SUB2 CO SUB2 ME HEATED 5 HR IN CHCL SUB3
YIELDED 73PERCENT ME
2,3,4,TRIDEOXY,3,4,DIDEHYDRO,5,6,7,8,DI-O-ISOPROPYLIDENE,3,
METHOXYCARBCNYL-L-ARABINO-OCTONOATE, SYRUP, (ALPHA) PRIME19 SUBD MINUS
8.6DEGREES.   FACILITY: ROSTOV.-NA-DONU GOS. UNIV.,
ROSTOV-CN-DCN, USSR.

UNCLASSIFIED

1/2   028   UNCLASSIFIED   PROCESSING DATE--30OCT70
TITLE--INFUSION DRIP CHOLEGRAPHY -U-

AUTHOR--GAVRILENKO, S.B.

COUNTRY OF INFO--USSR

SOURCE--VRACHEBNOYE DELO, 1970, NR 6, PP 61-64

DATE PUBLISHED------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DIAGNOSTIC METHODS, LIVER, GALLBLADDER, PANCREAS, TOXICITY,
  GLUCOSE, X RAY CONTRAST MEDIUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/1745   STEP NO--UR/0475/70/000/006/0061/0064

CIRC ACCESSION NO--AP0129113
                              UNCLASSIFIED

CIRC ACCESSION NO--AP0129113
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INFUSION DRIP CHOLEGRAPHY USED
BY THE AUTHOR SINCE 1967 ENABLES PROLONGED INTRODUCTION OF THE CONTRAST
MEDIUM, 287 PATIENTS WITH DISEASES OF THE LIVER, BILIARY TRACT AND
PANCREAS WERE STUDIED BY THIS METHOD.   IT IS CONCLUDED THAT DRIP
ADMINISTRATION OF THE USUAL DOSE OF BILIGNOST (40 ML. OF 20PERCENT
SOLUTION) WITH A EQUAL QUANTITY OF 20PERCENT GLUCOSE SOLUTION INCREASES
THE EFFICIENCY OF THE EXAMINATION AND REDUCES THE TOXIC EFFECT OF THE
CONTRAST MEDIUM, MAKING POSSIBLE TO EMPLOY INTRAVENOUS CHOLEGRAPHY AT
MORE EARLY TERMS FOLLOWING THE ACUTE PERIOD OF THE DISEASE.
FACILITY: RENTGENOLOGICHESKOYE OTDELENIYE PYATOY KLINICHESKOY BOL'NITSY
ZAPOROZH'YA.

UNCLASSIFIED

USSR   UDC 535.376:666.265

GAVRILENKO, T. B., KARAPETYAN, G. O., KACHIBAYA, V. N.

"Cathodoluminescence of Terbium-Activated Glasses"

Minsk, Zhurnal Prikladnoy Spektroskopii (Journal of Applied Spec-
troscopy), Vol 15, No 4, Oct 71, pp 663-666

Abstract: Terbium-activated, multicomponent silicate and borate
glasses are studied to compare their cathodoluminescence and
photoluminescence spectra. Measurement of the temperature depend-
ence of the emission line at 432 nm makes it possible to determine
the temperature of the sample during excitation of cathodolumines-
cence.

Cathodoluminescence, light emission, photoluminescence, extinction
times, and the temperature dependence of the spectra were measured.
For high terbium concentrations intense lines appear at 542 and
549 nm; for low concentrations prominent lines are seen at 400 to
500 nm and 520 to 620 nm. The short wavelength group is brighter
in photoluminescence than in cathodoluminescence, probably due to
temperature quenching.
1/2

USSR

GAVRILENKO, T. B. et al, Zhurnal Prikladnoy Spektroskopii, Vol 15, No 4, Oct 71, pp 663-666

Measurement of temperature dependence of photoluminescence in low concentration samples shows that the most intense short wavelength group is quenched almost completely at $\sim 110°C$. This permits indirect determination of sample temperature from the weakening of cathodoluminescence.

In both cathodo- and photoluminescence spectra the intensity of the short wavelength group decreases with increase in terbium concentration. Peak light emission is obtained with glass consisting of $20Li_2O \cdot 10Al_2O_3 . 50SiO_2 \cdot 20BaO$ (mol%) and 10% by weight of Tb_2O_3. Higher concentrations of Tb_2O_3 decrease light output because of concentration extinction.

The authors thank V. V. Kuprevich for valuable discussions. Orig. art has 3 figs., 1 table, and 4 refs.

2/2

USSR   UDC 532.593+662.215.1

VASIL'YEV, A. A., GAVRILENKO, T. P., MITROFANOV, V. V., SUBBOTIN, V. A., and
TOPCHIYAN, M. Ye.

"The Position of the Point of Transition Through Sonic Velocity Behind a
Detonation Front"

Abstract: An attempt is made to determine experimentally the position of the
Chapman-Jouguet surface behind the front of a detonation occurring in a pipe.
In pipes filled with various gas mixtures, the interaction of a detonation
wave with a thin plate, situated along the pipe axis, is studied at various
pressures to determine the position of the Chapman-Jouguet point. 2 figures.
1 table. 9 references.

1/1

USSR

UDC 534.222.2

VASIL'YEV, A. A., GAVRILENKO, T. P., TOPCHIYAN, M. YE.

"Location of the Chapman-Jouguet Surface in Multifront Detonation in Gases"

V sb. 3-y Vses. simpozium po goreniyu i vzryvu, 1971 (Third All-Union Symposium on Combustion and Explosion, 1971--collection of works), Chernogolovka, 1971, pp 199-200 (from RZh-Mekhanika, No 11, Nov 71, Abstract No 11B135)

Translation: In the example of gaseous explosive mixtures, a study was made of the transition of the steady-state detonation wave from a metal tube to a tube of the same diameter made of cellophane film. At low initial pressures of the gas mixture after the transfer of detonation to the cellophane tube, a detonation rate drop was observed, sometimes reaching extinguishing of the detonation. With an increase in pressure, beginning with some value, the detonation rate became identical in both tubes. It is proved that in the first case the detonation rate drop is connected with the occurrence of an expansion wave occurring as a result of expansion of the cellophane tube into the zone in which the gas velocity relative to the front is less than the speed of sound, that is, into the zone between the leading edge of the detonation and the Chapman-Jouguet surface. The position of the Chapman-Jouguet surface with respect to the distance between the leading edge of the wave and the place where noticeable expansion of the tube begins as a result of spreading of the walls was estimated
1/2

USSR

VASIL'YEV, A. A., et al., 3-y Vses. simpozium po goreniyu i vzryvu, 1971, Cher-
nogolovka, 1971, pp 199-200

by means of instantaneous photographs of the critical detonation in the cello-
phane tube . By using the analytical form of the expansion trajectory of the
cellophane tube, a one-dimensional numerical calculation of the profiles of the
mean gas parameters behind the detonation wave was performed as a result of
which it was discovered that these parameters differ essentially from those ob-
tained by the one-dimensional Zel'dovich-Neuman theory.

2/2

USSR   UDO 538.574.4

GAVRILENKO, V.G., DORFMAN, YA.M. [Scientific-Research Radiophysics Institute]

"On A Theory Of Scattering In Media With Spatial-Time Fluctuations"

Abstract: The propagation is considered of electromagnetic waves in nondis-
persing media with weak spatial-time fluctuations, during which the rate of
change of ϵ in time can be arbitrary. The work consists of two parts. In
the first, expressions are obtained by the perturbation method for the effective
dielectric constant, and the energy relations in media with spatial-time
fluctuations are discussed. In the second part the effect is considered of
rapid fluctuations on the spectrum of the scattering field. It is shown that
the presence of time fluctuations effects the energy relations for a propagat-
ing wave. In particular, with sufficiently rapid fluctuations the average wave
field increases despite the scattering. The authors thank N.G. Denisov, N.S.
Stepanov, Yu. A. Ryzhov, and V.V. Tamoykin for useful discussions. 10 ref.
Received by editors, 27 Apr 1971.

1/1

- 107 -

USSR

GAVRILENKO, V.G., LUPANOV, G.A., STEPANOV, N.S, [Gorkiy State University]

"Dynamo-Optical Effects In A Plasma"

Abstract: The propagation is considered of electromagnetic waves in an inhomo-geneous moving cold electron plasma without an external magnetic field and collisions. Movement is assumed to be steady. Parts one and two of the paper --"Tensor Of Dieletric Constant Of A Nonuniformly Moving Plasma" and "Propagation Of Waves In Slightly Inhomogeneous Medium -- consider waves in an isotropic plasma with parameters slowly variable in space, when it is possible to employ the approximations of geometrical optics. It is shown that in the case of a smooth change of the medium parameters, the beam trajectories are de- termined by the density distribution and the motion leads to rotation of the wave polarization plane. In part three--"Passage Of Waves Through A Layer With A Constant Velocity Gradient" -- an example is presented of an exact solution of the problem for a layer with an arbitrarily rapid change of velocity; in this case, not only a rotation of the polarization plane of the propagating wave takes place, but also a change of the character of the polarization with re-flection and refraction in the layer. 10 ref. Received by editors, 16 Apr 1971.

1/1

USSR

GAVRILENKO, V. G., DORFMAN, YA. M., Scientific Research Radio Physics Institute

"Theory of Scattering in Media with Time-Space Fluctuations"

Abstract: A study was made of the propagation of electromagnetic waves in non-dispersing media with weak time-space fluctuations. The rate of variation of the dielectric constant was considered arbitrary. The tensor of the effective dielectric constant and the scattered field spectrum were calculated by the small perturbation method. The energy relations in media with time-space fluctuations and the effect of fast fluctuations on the scattered field spectrum are discussed.

The time fluctuations have a significant effect on the mean wave when their characteristic frequency is on the order of the frequency of the propagated wave. Parametric amplification of the mean field is possible. The energy of the total field (the mean field plus the scattered field) increases even in the presence of slow fluctuations as a result of the work of external forces varying the dielectric constant. The width of the scattered field spectrum is determined by the characteristic time of variation of the dielectric

1/2

USSR

GAVRILENKO, V. G., et al., <u>Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika,</u>
Vol XV, No 2, 1972, pp 249-256

constant. In the presence of fast fluctuations the spectrum not only is broad-
ened but also significantly deformed.

GAVRILENKO, V. G., LUPANOV, G. A., STEPANOV, N. S.,

"Dynamo-Optical Effects in a Plasma"

Abstract: A study was made of the propagation of electromagnetic waves in a nonuniformly moving cold electron plasma without an external magnetic field and collisions. The motion is assumed stationary. In the case of smooth variation of the parameters of the medium, the beam trajectories in the zero approximation of geometric optics are determined by the concentration distribution, and the motion leads to rotation of the polarization plane in the wave. For laminar flow with a constant velocity gradient, an exact solution of the equations was obtained which is a superposition of two independent waves elliptically polarized in opposite directions. The law of refraction of these waves was found, and the corresponding coefficients of reflection and penetration were calculated in the case of a layer of finite thickness. Formulas are found for the tensor of the dielectric constant of a nonuniformly moving plasma, wave propagation in a weakly inhomogeneous medium, and passage of waves through a layer with a constant velocity gradient.
1/1

USSR

UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P., and MASLIN, D. N.

"Complexes of Organometallic, Hydride, and Halide Compounds of Aluminum"

Kompleksy Metalloorganicheskikh, Gidridnykh i Galoidnykh Soyedineniy Alyuminiya [English Version Above], Moscow, Nauka Press, 1970, 296 pages

Annotation: This book deals with the physical and chemical properties and synthesis of complexes of aluminum formed of its organic, hydride, and halide compounds with organic and inorganic addends. Particular attention is given to the molecular structure of the complexes and the strength of bonds in them. The spectral characteristics of complexes and the role of complex formation in the synthesis of compounds of aluminum and their solubility are analyzed. Plans of the dissociation of complexes in the liquid phase are discussed, and the nature of ions is analyzed in detail. Cathode and anode processes

1/10

- 2 -

USSR   UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i Galoidnykh
Soyedineniy Alyuminiya, Moscow, Nauka Press, 1970, 296 pages

in the electrolysis of melts and solutions and problems of practical
electrodeposition of aluminum and electrochemical synthesis in non-
aqueous media are discussed.

The book is designed for a broad range of persons interested in
general problems of complex formation, chemicals operating with
organic aluminum and hydride compounds, and electrochemists special-
izing in non-aqueous solutions. The broad range of factual material
allows the book to be used as a reference work as well. 94 tables;
45 figures; 1,697 biblio. refs.

2/10

USSR   UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i
Galoidnykh Soyedineniy Alyuminiya, Moscow, Nauka Press, 1970, 296 pages

Table of Contents

3/10

USSR   UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i
Galoidnykh Soyedineniy Alyuminiya, Moscow, Nauka Press, 1970, 296 pages

4/10

USSR

UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i
Galoidnykh Soyedineniy Alyuminiya, Moscow, Nauka Press, 1970, 296 pages

5/10

USSR   UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i
Galoidnykh Soyedineniy Alyuminiya, Moscow, Nauka Press, 1970, 296 pages

6/10

USSR   UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i Galoidnykh
Soyedineniy Alyuminiya, Moscow, Nauka Press, 1970, 296 pages

7/10

USSR

UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P., MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i Galoidnykh Soyedineniy Alyuminiya, Moscow, Nauka Press, 1970, 296 pages

8/10

USSR   UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i Galoidnykh
Soyedineniy Alyuminiya, Moscow, Nauka Press, 1970, 296 pages

9/10

USSR   UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i Galoidnykh
Soyedineniy Alyuminiya, Moscow, Nauka Press, 1970, 296 pages

10/10

Acc. Nr. AP0045791 — Abstracting Service: Ref. Code:
                       CHEMICAL ABST.   4/70   NE 0000

79136s Action of halogens upon Grignard and Iotsich re-
agents. Zakharkin, L. I.; Gavrilenko, V. V.; Paley, B. A.
(Inst. Org.-Elem. Compounds, Moscow, USSR). J. Organo-
metal. Chem. 1970, 21(2), 269-72 (Eng). Chlorination of Gri-
gnard and Iotsich reagents RMgX (where X = Br, I) gives con-
siderable amts. of RI and RBr together with RCl. Bromina-
tion of RMgI results in RI and RBr. Bromination of RMgCl
leads to RBr, and iodination of RMgX(X = Cl, Br) to RI. A
method is proposed for the prep. of RC:CCl by the reaction of
Cl with RC:CMgCl.   RCLC

1/1   ..—   ALS

REEL/FRAME
19780786

USSR   UDC 8.74

GAVRILENKO, YE. T.

"Programming Programs for the Ural-2, Ural-3 and Ural-4 Computers"

Programmiruyushchiye programmy dlya vychislitel'nykh mashin Ural-2, Ural-3 i
Ural-4 (cf. English above), Moscow, Mashinostroyeniye, 1972, 216 pp, ill. 88 k.
(from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V470K)

Translation: This book contains a discussion of the materials on automation
of programming for the Ural-2, Ural-3 and Ural-4 computers based on utilizing
programming programs. The input language of the presented programming programs
is based on the structural elements of the ALGOL-60 language. In the program-
ming programs provision is made for the possibility of including library sub-
routines (in machine language) in the assembled operating program.

1/1

GAVRILENKO, Ye. V.

THE GONADOTOXIC AND EMBRYOTOXIC EFFECT OF THE FOOD DYE AMARANTH

[Article by A.I. Shtenberg, and Ye. V. Gavrilenko, Laboratory of Toxicology of Pesticides (head: Professor A.I. Shtenberg), Institute of Nutrition AMS USSR, Moscow, Voprosy Pitaniya, Russian, No 5, 1972, submitted 5 May 1972, pp 28-33]

Amaranth in 1.5 mg/kg doses (maximum permissible dose) showed a change of the functional state of the spermatozoa indicating a reduction of their resistance, activity, shortening of the time of motility and length of life in a nutrient medium at room temperature. In females, an inhibition of the estrual cycle was noted. The interestrual period was increased and the period of estrus was reduced which led to an overall prolongation of the estrual cycle and to a decrease of the number of cycles, occuring for one female per month. In experimental animals, there was observed an increase of gonadotropic function of the hypophysis. After administration of amaranth to experimental pregnant female rats in those same doses, there was noted an increase of postimplantation mortality of embryos throughout the course of pregnancy which led to a reduction of the number of live rats in litters. These data indicate the existence of gonadotoxic and embryotoxic effects of the dye.

Continuing preceding investigations /1/, we conducted a study of the effect of amaranth on the functional and morphological state of the testes and ovaries and also on the fetus. This problem has not yet been studied in relation to amaranth.

In the experiments, we used 320 pubescent Wistar rats (male and female and 30 infantile mice. Amaranth¹ was administered orally in an aqueous solution.

and 15 mg/kg was given orally daily for 12 months. Male rats

1. From the "JCI" Firm. Analogous investigations were conducted with Soviet amaranth.

- 1 -

[I - USSR - C]

USSR

UDC: 669.14.018.8.004.12

GAVRILENKO, Yu. V., CHERNYAKOV, V. A., VOYNOV, S. G., Central Scientific Research Institute of Ferrous Metallurgy

"Nonmetallic Inclusions in Chromium Stainless Steel".

Abstract: Nonmetallic inclusions in chromium stainless steel were studied by various methods in steels produced by ordinary steel making processes and in steels treated in the ladle with liquid synthetic slag. The studies showed the effectiveness of this technology for the production of metals with low content of sulfur, oxygen and nonmetallic inclusions. The inclusions were studied by metallographic testing, electrolytic dissolution and micro-spectral analysis. It was shown that the nonmetallic inclusions in the experimental metal include large quantities of alumina, some manganese oxide and ferrous oxide, creating good conditions for assimilation and removal from the metal. The mean and maximum percentages of oxides and globules, as well as the contents of oxygen and nonmetallic inclusions were lower in the metal treated by the synthetic slag, sharply reducing the danger of hairline cracking.

1/1

USSR   UDC: 51:155.001.57:612.82

GAVRILETS, Yu. N.

"On Quantitative Investigation of the Structure of Complex Social Systems"

V sb. Modelir. sots. protsessov (Modeling of Social Processes--collection
of works), Moscow, "Nauka", 1970, pp 74-92 (from RZh-Kibernetika, No 1, Jan
71, Abstract No 1V664)

Translation: Particular attention is given to the following problems: 1)
how a strict approach may be made to the problem of quantitative representa-
tion of the structure of population and labor in their dynamics; 2) what
special methods may be used for mathematical analysis of complex social
systems. It is assumed that the base for specific studies and recommenda-
tions is the system of corresponding primary sociological information. Both
points are actually analyzed simultaneously, showing how it becomes neces-
sary to "overcome complexity" in solving the problem of a systems description
of society and its structure, and how to proceed in a given case. In ad-
dition, consideration is also given to some procedural problems of quanti-
tative modeling of social processes.

1/1

Explosives and Explosions

USSR

UDC 532.525.1

MEL'NIKOV, M. A., GAVRILIN, A. I., DIMOVA, N. I., and KALASHNIKOV,
A. L., Tomsk Polytechnical Institute Imeni S. M. Kirov

"Mechanism of the Explosion Initiation of Silver and Thallium Azides
by Electrical Discharge"

Abstract: Experimental data are reported on the explosion initiation
of silver and thallium azides by means of an electrical discharge.
The samples studied were subjected to charge impulses with a front of
$T_{fr}=5 \cdot 10^{-6}$ sec and amplitude 4.5 kv. Critical energy of the initia-
tion of AgN_3 and TlN_3 by an electrical discharge was measured by os-
cillography of the current, charge and the beginning of glow; it was
found to be $0.2 \cdot 10^{-3}$ and $0.5 \cdot 10^{-3}$ J respectively. The results support
the contention about thermal nature of the initiation of azides by
electrical discharge. It was shown experimentally that a spark with
an energy below that of the critical one does not cause the explosion
of above azides. The spark energy appears to be the determinant ini-
tiation parameter.

1/1

1/2   007   UNCLASSIFIED   PROCESSING DATE--11SEP70
TITLE--SCREW FEEDER FOR FREE FLOWING MATERIAL -U-

AUTHOR--GAVRILIN, A.V., FRAYMAN, R.S., REYBAKH, M.S., POLYAK, L.G.

COUNTRY OF INFO--USSR

SOURCE--KHIM. PROM. (MOSCOW) 1970, 46(1) 60-3

DATE PUBLISHED--------70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--MATERIAL HANDLING, FEED MECHANISM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1938/1337   STEP NO--UR/0064/70/046/001/0060/0063

CIRC ACCESSION NO--AP0106114
                         .   UNCLASSIFIED

2/2   007
CIRC ACCESSION NO--AP0106114   UNCLASSIFIED   PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A GRAVITY SCREW FEEDER FOR
THERMALLY UNSTABLE, FINELY DIVIDED SOLIDS IS DISCRIBED; ITS MAIN
COMPONENT IS A ROTATING SPIRAL CHANNEL, AND ITS ACCURACY IS IN MOST
CASES PLUS OR MINUS 1PERCENT, INDEPENDENTLY OF THE DIRECTION OF
ROTATION.

UNCLASSIFIED

USSR

UDC: 532.593

GAVRILIN, B. L., MIRABEL', A. P.

"Numerical Model of Generation of Energy Spectrum by Interaction of Internal Waves"

Vnutr. Volny v Okeane [Internal Waves in the Ocean -- Collection of Works], Novosibirsk, 1972, pp 152-167 (Translated from Referativnyy Zhurnal Mekhanika, No 12, 1972, Abstract No 12B476, from the resume)

Translation: A mathematical model of a three-dimensional, viscous, incompressible fluid is studied. The exciting motion is the vertical velocity, created as a stationary wave, harmonically distributed in the horizontal direction and having a vertical profile corresponding to the profiles of internal waves. Attention is accented on large scale oceanic processes, horizontal in nature and playing an important role in the formation of the vertical structure of hydrophysical elements. This role is clearly demonstrated using a simple thermocline model.

The purpose of the work is mathematical modeling of horizontal motions considering nonlinear redistribution of energy and the vertical structure corresponding to oceanic processes.

1/1

1/2   032   UNCLASSIFIED   PROCESSING DATE--20NOV70
TITLE--LAGRANGIAN INVARIANTS OF INVISCID COMPRESSIBLE FLUID DYNAMICS -U-

AUTHOR-(02)-GAVRILIN, B.L., ZASLAVSKIY, M.M.

CCUNTRY OF INFO--USSR

SCURCE--AKADEMIIA NAUK SSSR, DOKLADY, VOL. 192, MAY 1, 1970, P. 48-51

DATE PUBLISHED--01MAY70

SUBJECT AREAS--PHYSICS

TCPIC TAGS--HYDRODYNAMIC THEORY, COMPRESSIBLE FLUID, LAGRANGE EQUATION,
   ADIABATIC APPROXIMATION, THERMODYNAMIC PROPERTY

CCNTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/1641   STEP NO--UR/0020/70/192/000/0048/0051
CIRC ACCESSION NO--AT0133546
                     UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0133546

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ATTEMPT TO SYSTEMATIZE THE KNOWN LAGRANGIAN INVARIANTS AND TO DEVELOP A GENERAL METHOD OF CONSTRUCTING A COMPLETE SET OF LAGRANGIAN INVARIANTS FOR A PARTICULAR CLOSED SYSTEM OF HYDRODYNAMICS EQUATIONS. IT IS SHOWN THAT, IF A CERTAIN THERMODYNAMIC POTENTIAL, SUCH AS THE SPECIFIC INTERNAL ENERGY, IS KNOWN EXPLICITYLY, FOUR LAGRANGIAN INVARIANTS CAN COMPLETELY DETERMINE THE UNKNOWN EULER FIELDS OF THE VARIABLES FIGURING IN THE SYSTEM OF EULER EQUATIONS FOR AN ADIABATIC MODEL OF AN INVISCID COMPRESSIBLE FLUID. SOME REMARKS ARE ALSO MADE CONCERNING THE APPLICATION OF LAGRANGIAN INVARIANTS TO BAROTROPIC AND ISOTHERMAL MODELS.   FACILITY: AKADEMIIA NAUK SSSR, INSTITUT OKEANOLOGII, MOSCOW, USSR.

UNCLASSIFIED

1/2   012   UNCLASSIFIED   PROCESSING DATE--30OCT70
TITLE--TAUTOMERISM OF 5,5,DISUBSTITUTED BARBITURIC ACIDS -U-

AUTHOR-(03)-GAVRILIN, G.F., CHISTYAKOV, V.YE., KONONENKO, G.A.

CCUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(3), 669-72

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--TAUTOMERISM, BARBITURATE, ORGANIC ACID, KETONE, PHARMACEUTICS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0932   STEP NO--UR/0079/70/040/003/0669/0672

CIRC ACCESSICN NO--AP0124592
                    UNCLASSIFIED

UNCLASSIFIED   PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124592
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IR SPECTRA OF BARBITURIC ACIDS AND
THEIR K SALTS SHOW THAT 5,5,DISUBSTITUTED ACIDS (PHONOBARBITAL AND ITS
HYDRATE, CARBITAL, AMYTAL) POSSESS, IN THE SOLID STATE, THE TRIKETO OR
DIKETOLACTIM STRUCTURES. HYDROLYSIS OF BENZONAL 1 HR WITH AQ. NAOH GAVE
THE PRODUCT IDENTIFIED AS PH SUB2 CHCONBZCONH SUB2 M. 210DEGREES, I. E.
ENOLIZATION OCCURS AT THE 4(6),CARBONYL GROUP OF BARBITURIC ACID.
FACILITY: VCVOKUZNETSK. NAUCH.-ISSLED. KHIM.-FARM. INST., NOVOKUZNETSK,
USSR.

UNCLASSIFIED

AP0040888

G

REF. Code
URO103

PRIMARY SOURCE: Avtomatika i Telemekhanika, 1970, Nr / , pp/05-/1

CONSTRUCTION OF AUTO-OSCILLATORY ADAPTIVE SYSTEM WITH VARIABLE STRUCTURE

A. D. ALEKSANDROV, L. S. VALKOV, M. G. GAVRILIN,
L. YA. MALEN'KIY, N. V. SABUROV, V. S. KHABAROV

One of the methods of constructing an adaptive system of control in the class of systems with variable structure is considered. There is suggested a method of the synthesis of the algorithm of the re-adjustment of the adapting device for an autooscillatory system, the re-adjustment based on the application of the method of harmonic linearization. The results of the theory are illustrated with examples.

//

19750627

USSR   UDC 669.76'6.018.9(088.8)

KUDRYAVTSEV, N. T., TYUTINA, K. M., GAVRILINA, L. P., and GAVRILIN, O. N.,
Moscow Institute of Chemical Technology imeni D. I. Mendeleyev

"Method of Electrolytic Deposition of Tin-Bismuth Alloy"

Translation: The method of electrolytic deposition of Sn-Bi alloy from an
electrolyte containing $SnSO_4$, $Bi(NO_3)_2$, H_2SO_4 is unique in that, in order to
raise the permissible current density limit and increase electrolyte sta-
bility, preparation OS-20 is put into the electrolyte in the following
ratio of components (in g/liter): $SnSO_4$ 50-55, $Bi(NO_3)_2$ 0.5-0.8, H_2SO_4
95-105, preparation OS-20 2-5, and the process is carried on at D = 0.5-2
a/sq decimeter and temperature of 20-25°.

1/1

AZIMOV, S. A., MYALKOVSKIY, V. M., NURITDINOV, Kh., RASULKULOV, M. S.,
ABDULLAYEV, A. M., BEYSENBAYEV, R. U., GAVRILIN, Ye. V., TALIPOV, D. A.,
MULLAZHONOV, E. Zh., TILLAYEV, T., RAKHMANOV, Zh., UMEROV, R.,
ULIMAYEVA, F. A., KHEM, E., YULDASHEAYEV, T. S., Institute of Nuclear
Physics of the Academy of Sciences Uzbek SSR

"Study of the Characteristics of High-Energy Interactions of Pions and
Nucleons"

Abstract: Experimental data obtained at the Kum-Bel' High-Altitude
Station of the Physicotechnical Institute of the Academy of Sciences
Uzbek SSR are reported. The station is 3200 m above sea level. The
setup contains three series of wide-gap spark chambers,with effective
areas of 2 m^2 placed above and below the target. The Cerenkov spectro-
meter with total absorption and an ionization calorimeter with an area of
10 m^2 were used to measure the primary energy E_0. Up to the present time
experimental data obtained over 630 hours of operation of the device have
been processed,with a high-voltage pulse being supplied to the electrodes of
the spark chambers.Showers with an energy of > 200 Gev generated in the target
were selected for analysis. The following ratio was obtained for the number
1/2

USSR

AZIMOV, S. A., et al., Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 36, No 8, Aug 72, pp 1626-1631

of primary charged N_c and neutral N_n particles: $N_c/N_n = 2.3 \pm 0.3$; this shows that the proportion of charged particles is ~34% of all nuclear active particles, thus making it possible to study pion-nuclear collisions by comparing the characteristics of the interaction of charged and neutral primary particles. A weak functional dependence between the inelasticity coefficient $\langle K_{\pi^0} \rangle$ and the atomic number of the target nucleus and a strong functional dependence between this coefficient and the nature of the primary particles were obtained for interactions of hadron with $E_0 > 200$ Gev. $\langle n_g \rangle$ is almost a logarithmic function of E_0. The average multiplicity in the interaction of pions with neutrons in paraffin is identical within the experimental limit. A considerable azimuthal effect was observed for the angular distribution of secondary particles. The azimuthal effect has its greatest value for showers with $n_s = 8-15$, or a multiplicity close to average.

2/2

USSR   UDC 669.76'6.018.9(088.8)

KUDRYAVTSEV, N. T., TYUTINA, K. M., GAVRILINA, L. P., and GAVRILIN, O. N.,
Moscow Institute of Chemical Technology imeni D. I. Mendeleyev

"Method of Electrolytic Deposition of Tin-Bismuth Alloy"

Translation: The method of electrolytic deposition of Sn-Bi alloy from an
electrolyte containing $SnSO_4$, $Bi(NO_3)_2$, H_2SO_4 is unique in that, in order to
raise the permissible current density limit and increase electrolyte sta-
bility, preparation OS-20 is put into the electrolyte in the following
ratio of components (in g/liter): $SnSO_4$ 50-55, $Bi(NO_3)_2$ 0.5-0.8, H_2SO_4
95-105, preparation OS-20 2-5, and the process is carried on at D = 0.5-2
a/sq decimeter and temperature of 20-25°.

1/1

USSR

UDC: 621.793.3

GOLOVCHANSKAYA, R. G., GAVRILINA, L. F., SMIRNOVA, T. A., and KUDRYAVTSEV, N. T., Moscow Institute of Chemical Technology imeni D. I. Mendeleyev

"Chemical Nickel Plating of MA-8 Magnesium Alloy"

Abstract: A strong cohesion of nickel deposits (5-7 microns) with the base metal is attained after etching the MA-8 alloy in concentrated acetic acid for 0.5 - 1 minute followed by treatment with a sodium pyrophosphate solution (70 g/l) at 70°C for 1 hour. The flouine ion has been known to inhibit magnesium corrosion. This study has shown that ammonium fluoride at pH 8 increases the stability of the nickel plating solution; at 60-70°C the surface of the solution becomes covered with a dense deposit of metallic nickel. The buffer properties of the solution will be improved by sub-stituting ammonium bifluoride for ammonium fluoride. In 15 minutes the maximum thickness of the nickel deposit will be 5-6 microns. A longer plating duration will restore the nickel in the solution. For the chemical plating of MA-8 alloy this study suggests the following formula-

1/2

USSR

GOLOVCHAHSKAYA, R. G., et al, Zashchita Metallov, Vol 6, No 5, Sep-Oct 70, pp 614-615

tion of the solution (g/l): nickel sulfate, 30; sodium hypophosphite, 25; ammonium bifluoride, 15; glycine, 15; pH, 8; temperature, 60-70°C; deposition rate, 10 microns/hr. Glycine and ammonium bifluoride are dissolved in water, and nickel sulfate and sodium hypophosphite are then added. A 20% NaOH solution is added gradually to pH 8.

1/2   027   UNCLASSIFIED   PROCESSING DATE--09OCT70
TITLE--POROUS POLIMERS AS ADSORBENTS AND SUPPORTS IN GAS CHROMATOGRAPHY
  -U-
AUTHOR-(04)-USTINOVSKAYA, I.A., GAVRILINA, L.YA., MALAKHOV, B.B., YANSHIN,
  YA.I.
COUNTRY OF INFO--USSR

SOURCE--IZVESTIYA SIBIRSKOGO OTDELENIYA AKADEMII NAUK SSSR, NO 4, SERIYA
  KHIMICHESKIKH NAUK, 1970, NR 2, PP 18-22
DATE PUBLISHED------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYMER, ADSORPTION, GAS CHROMATOGRAPHY, POROSITY/(U)POLYSORB1
  POLYMER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1377   STEP NO--UR/0289/70/000/000/0018/0022

CIRC ACCESSION NO--AP0112857
                      UNCLASSIFIED

2/2   027   UNCLASSIFIED   PROCESSING DATE--09OCT70
CIRC ACCESSION NO--AP0112357
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A GAS CHROMATOGRAPHIC BEHAVIOR
  POLYSORB-1 HAS BEEN INVESTIGATED. IT HAS BEEN SHOWN THAT POLYSORB-1
  SHOULD BE CLASSIFIED AS A WEAKLY SPECIFIC SORBETN III TYPE BY KISELEV.
  POLISORB MAY BE USED FOR THE GAS CHROMATUGRAPHIC ANALISIS OF THE
  CATALITIC OXIDATION PRODUCTS.   FACILITY: INSTITUT KATALIZA SO AN
  SSSR, NOVOSIBIRSK.

UNCLASSIFIED

USSR

SEPPI, I. V., Professor, and GAVRILINA, V. V., Engineer-technologist,
Institute of Nutrition, Academy of Medical Sciences USSR

"Botulism"

Abstract: in this popularized article Professor Seppi characterizes botulism
and its insidiousness. He points out that under present Soviet conditions
botulism is most often caused by improperly prepared homemade foods, chiefly
mushrooms. As an example he quotes a case where a person had consumed only a
small piece of sausage given to her on a fork that was previously used in eat-
ing mushrooms which were the cause of severe poisoning of several persons by
botulinus toxin. He notes that the power of this toxin surpasses all other
bacterial toxins and chemical poisons. One gram of it is sufficient to poison
one hundred million persons. Although such quantities do not accumulate in
foodstuffs, even the slightest amount of it presents a great danger.
    Statistical data show that in every second person affected by botulism,
the poisoning was caused by homemade mushroom preserves, in every fifth case
homemade salt or smoked fish was responsible, and in every sixth case homemade
vegetable preserves were the cause. Homemade fruit or pork preserves accounted
for other cases.
1/2

USSR

SEPPI, I. V. and GAVRILINA, V. V., Zdorov'ye, No 8, Aug 72, pp 16-17

    Its insidiousness consists in the fact that botulinus toxin, with rare
exceptions, does not change either appearance, or taste, or odor of foods.
Moreover, the vomiting and intestinal disorders which usually accompany poison-
ings are rarely present in botulism; body temperature is almost normal, and to
such symptoms as dryness of the mouth, hoarseness, clouding of vision, especi-
ally when combined with ingestion of alcohol, often no importance is attached
in the beginning.
    V. V. Gavrilina gives detailed recommendations on how to prepare homemade
preserves, in order to avoid botulism. Her recipes include: preserved stewed
fruits (compotes), pickled cucumbers and tomatoes, salt mushrooms, salt fish,
and dried fish.

2/2

USSR

GAVRILAK., A. A.

"A Phototemplate"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 18, 1970, Author's Certificate No 271599, filed 20 Jan 69, p 41

Abstract: This author's certificate introduces a phototemplate for making integrated circuits and semiconductor devices. As a distinguishing feature of the patent, the precision of registration of the drawing of the semiconductor plate with the drawing of the phototemplate is improved by making the registration elements in the form of a comb of rectilinear projections and depressions.

1/1

USSR

VITYAYEV, Ye. Ye., GAVRILKO, B. P., ZAGORUYKO, N. G., SAMOKHVALOV, K. F.

"Requirements for Prediction Algorithms"

Vychisl. Sistemy [Computer Systems -- Collection of Works], No 50, Novosibirsk, 1972, pp 101-105 (Translated from Referativnyy Zhurnal, Kibernetika, No 3, Moscow, 1973, Abstract No 3 V721 by the authors).

Translation: Certain requirements for algorithms for prediction of empirical regularities are formalized.

1/1

USSR

GAVRILKO, V. I., GERASIMENKO, R. T., KALASHNIKOV, V. I., KLIMENKO, A. N.

"Input of Analog Information to the M-220 Computer"

Vychisl. Mat. i Vychisl. Tekhn. [Computational Mathematics and Computer Equipment -- Collection of Works], No 2, Khar'kov, 1971, pp 151-156, (Translated from Referativnyy Zhurnal, Kibernetika, No 2, 1972, Abstract No 2 V704 by the author's).

Translation: An automatic system for input of analog information to a digital computer is described. The characteristics of the apparatus are presented. The operating mode of the M-220 in the complex and the method of writing of program for information input are described. A method is indicated for accounting for the instability of the rate of movement of the magnetic tape during input.

1/1

1/2   018   UNCLASSIFIED   PROCESSING DATE--16OCT70
TITLE--THERMAL EFFECTS DURING THE HEATING OF SYNTHETIC QUARTZ CRYSTALS -U-

AUTHOR-(04)-GAVRILKO, V.M., KASHKUROV, K.F., KLESHCHEV, G.V., SAFRONOV,
  G.M.
COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(3), 421-4

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--QUARTZ, CRYSTAL, NONMETALLIC INCLUSIONS, ENDOTHERMIC EFFECT,
  THERMAL ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/0832   STEP NO--UR/0363/70/006/003/0421/0424

CIRC ACCESSION NO--AP0118003
                        UNCLASSIFIED

CIRC ACCESSION NO--AP0118008
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SYNTHETIC QUARTZ CRYSTALS WERE
  INVESTIGATED BY DTA. THE HEATING CURVES OF SYNTHETIC QUARTZ SAMPLES
  STUDIED SHOWED THE FOLLOWING THERMAL EFFECTS: ENDOTHERMAL EFFECT AT
  530-570DEGREES, ASSOCD. WITH POLYMORPHIC TRANSFORMATION IN QUARTZ;
  ENDOTHERMAL EFFECT AT 100-190DEGREES, OBSD. FOR SAMPLES THAT CONTAIN
  INCLUSIONS OF THE COLLOIDAL PHASE; ENDOTHERMAL EFFECT AT 140-240DEGREES,
  ASSOCD. WITH MICROSCOPIC INCLUSIONS OF THE ORIGINAL SOLN. IN THE
  CRYSTAL; EXOTHERMAL EFFECT AT 200-410DEGREES, FOR WHICH THE MICROGLASSY
  INCLUSIONS IN THE CRYSTALS ARE PROBABLY RESPONSIBLE.   FACILITY:
  INST. OBSHCH. NEORG. KHIM. IM. KURNAKOVA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 621.385

PIPKO, A. I., GAVRILOV, A. A., KOMISSARCHIK, V. M.

"An Installation for Vacuum Treatment of the Cathode Elements of Magnetrons"

Abstract: This Author's Certificate introduces a device for vacuum treating the cathode elements of magnetrons. The unit contains a working chamber, a prevacuum chamber, a loading box, and a table for holding parts with vacuum electrical leads which can be moved out of the loading chamber into the working chamber. As a distinguishing feature of the patent, provision is made for checking the thermionic and secondary emission properties of the cathode by equipping the installation with a measuring device mounted on the working table. This device is made in the form of a cylindrical anode with an annulus in the middle, and an annular tungsten cathode surrounding the anode at the level of the annulus. The anode and cathode are fastened to insulators, and the the inner surface of the anode acts as a collector of secondary and reflected electrons from the cathodes being inspected.

1/1

- 124 -

1/3 · 014   UNCLASSIFIED   PROCESSING DATE--27NOV70
TITLE--RESULTS OF USING AEROMETHODS IN GEOLOGY IN THE PAST 25 YEARS -U-

AUTHOR-(05)-VOSKRESENSKIY, YE.N., ORENOV, N.V., GAVRILOV, A.A., YEREMIN,
  V.K., NIKITSKIY, V.YE.
COUNTRY OF INFO--USSR

SOURCE--RAZVEDKA I OKHRANA NEDR, 1970, NR 2, PP 5-8

DATE PUBLISHED-------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--GEOLOGIC EXPLORATION, PROSPECTING, AEROMAGNETIC SURVEY,
  RADIOMETER, MAGNETOMETER, AEROELECTRIC SOUNDING, GEOPHYSIC
  INSTRUMENT/(U)AYAAM6 AEROMAGNETOMETER, (U)AMM13 AEROMAGNETOMETER
  INSTRUMENT, (U)AM13 AEROMAGNETOMETER INSTRUMENT, (U)AEM49
  AEROMAGNETOMETER INSTRUMENT, (U)ASG48 GEOPHYSIC INSTRUMENT, (U)SG10

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/1357   STEP NO--UR/9083/70/000/002/0005/0008

CIRC ACCESSION NO--AP0136722
                    UNCLASSIFIED

CIRC ACCESSION NO--AP0136722
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A HISTORY OF THE DEVELOPMENT OF
  AEROMETHODS IN GEOLOGICAL PROSPECTING, LISTING INSTITUTIONS,
  PERSONALITIES, AND INSTRUMENTS, IS GIVEN. IN 1949, THE VIRG INTRODUCED
  THE SG-10 AERORADIOMETER, AND LATER DEVELOPED THE ASGM-25, ASG-46, AND
  ASG-48 AEROGEOPHYSICAL STATIONS FOR SIMULTANEOUS AEROMAGNETIC AND
  AERORADIOMETRIC SURVEYS. THE ASG-48 INSTRUMENT IS USED TO DETECT
  CONCENTRATIONS OF URANIUM THORIUM, ETC. IN THE 1950'S, THE AEM-49
  FERROSOUND AEROMAGNETOMETERS WERE INTRODUCED. THE MINISTRY OF GEOLOGY
  THEN INTRODUCED THE AM-13 AND AMM-13 AEROMAGNETOMETERS. THE
  VNIIGEOFIZIKA DEVELOPED AND INTRODUCED THE PROTON MAGNETOMETER ACCESSORY
  TO FERROSOUND AEROMAGNETOMETERS. VITR DEVELOPED THE AYAAM-6 PROTON
  AEROMAGNETOMETER CAPABLE OF MEASURING ABSOLUTE VALUES OF GEOMAGNETIC
  FIELD FORCE AND, AT PRESENT, IS SUCCESSFULLY TESTING A NEW MODEL PROTON
  AEROMAGNETOMETER, THE AMP-7, FOR BAUXITE PROSPECTING. A HELICOPTER
  BORNE AEROELECTROPROSPECTING DEVICE, THE INFINITELY LONG CABLE, WAS
  INTRODUCED IN 1959. THE AIRCRAFT BORNE AERIS SYSTEM (INDUCTION
  INVESTIGATIONS) WAS DEVELOPED AT THE SAME TIME. IN THE 1960'S, BITR
  DEVELOPED APPARATUS FOR THE ROTATING MAGNETIC FIELD SYSTEM, WHILE
  SVEGINGEO DEVELOPED APPARATUS FOR THE AERORADIOKIP METHOD OF SEARCHING
  OUT WATER IN DESERT AREAS. VIRG DEVELOPED A SIMILAR INSTRUMENT TO USE
  IN GEOLOGICAL MAPPING OPERATIONS VNIIGEOFIZIKA INTRODUCED THE SUCCESSFUL
  POISK RADIOGEODETIC SYSTEM. IN 1968-69 SEVERAL DIFFERENT INSTITUTES
  DEVELOPED THE AMPP AEROELECTROPROSPECTING SYSTEM FOR USE IN A METHOD
  INVOLVING TRANSITION PROCESSES OF THE ELECTROMAGNETIC FIELD.

                        UNCLASSIFIED

UNCLASSIFIED

CIRC ACCESSION NO--AP0136722

PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--RADAR, THERMAL, SPECTROMETRIC, AND RELATED AERIAL SURVEY METHODS ARE DEVELOPED IN LAEM. VARIOUS GEOLOGICAL SURVEY PROJECTS NOW UNDER WAY ARE GIVEN.   FACILITY: VSESOYUZNYY AEROGEOLOGICHESKIY TREST.   FACILITY: VSESOYUZNYY NAUCHNO-ISSLEDOVATEL'SKIY INSTITUT EKONOMIKI MINERAL'NOGO SYR'YA I GEOLOGORAZVEDOCHNYKH RABOT. FACILITY: MINISTERSTVO GEOLOGII SSSR.

UNCLASSIFIED

USSR   UDC: 621.396.677.01

DYMSKIY, V. N., GAVRILOV, A. M., MIZGAYLOV, V. N., MOROZOV, G. A., CHONI,
Yu. I.

"Synthesis of Antennas on the Basis of Experimental Data"

Tr. Kazan. aviats. in-ta (Works of the Kazan' Aviation Institute), 1970,
vyp. 104, pp 19-28 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12B7)

Translation: The authors analyze formulation of the problem of synthesizing
antennas as a problem of calculating the distribution of current density in
a region of predetermined geometric configuration with respect to a pre-
determined complex vector radiation pattern. In this formulation, the
problem reduces to solution of an operator equation. A physical interpre-
tation is given for the operators appearing in this equation; consideration
is given to the feasibility of determining these operators from experimental
data. Practical examples are analyzed. Four illustrations, bibliography
of six titles. N. S.

1/1

- 13 -

USSR

GAVRILOV, A. N., CHIZHIKOV, V. Yu., IZMAYLOV, Ye. A., Moscow Aviation In-
stitute imeni S. Ordzhonikidze

"Analytical Description of the Spatial Distribution of Scattering of the
Magnetic Field of a Gyromotor"

Abstract: Analytical expressions are found which approximate the actual
distribution of the scattering field of a gyromotor. It is shown that the
scattering field of a specific gyroscopic element can be determined by using
selected analytical expressions and making just a few measurements at nodal
points in space. The resultant formulas can be used for calculating the
extent to which the scattering field of a gyromotor affects the output
characteristics of a floating gyroscopic device.

1/1

USSR

UDC: 531.383

GAVRILOV, A. N., CHIZHIKOV, V. Yu., and IZMAYLOV, Ye. A.

"Experimental Investigation of Magnetic Field Dispersion in a Gyromotor"

Leningrad, Priborostroyeniye, No 4, 1972, pp 122-128

Abstract: Because the magnetic field in a gyromotor may create a moment that affects the rotation of the output axis of the instrument and may distort the signal of induction sensors used in gyroscopes, this paper proposes a method of experimentally determining the distribution of the dispersion field and presents the results of an experiment conducted with a floating gyro unit containing a motor. The unit was hermetically sealed in an aluminum casing, the ring of the motor was also made of an aluminum alloy while its active part was of the Vicalloy type. A diagram of the experimental equipment is given, the procedure is explained, and the method of measurement detailed. This last involves the use of three coils placed in the three mutually perpendicular planes, in each of which a voltage is induced by the magnetic field. Plots of the dispersion field of the gyromotor are given. The authors are connected with the S. Ordzhonikidze Moscow Aviation Institute.
1/1

- 114 -

USSR

UDC 621.357.12.035.2

1

KOROVIN, N. V., GRISHAYENKOV, B. G., PANICH, R. U., GAVRILOV, B. A., RYABUKHIN, A. G.

"Some Problems of the Theory and Results of Studies of the Operation of Porous Electrodes in Devices for the Electrolysis of Aqueous Solutions of Bases"

Tr. Kurgan. mashinostroit. in-ta (Works of the Kurgan Machine Building Institute), 1971, vyp. 17, pp 42-49 (from RZh-Khimiya, No 6 (II), Jun 72, Abstract No 6L257)

Translation: A study was made of some of the operating characteristics of liquid-gas porous electrodes manufactured by the cermet procedure from carbonyl Ni powder (particle size 3-6 μ) and used in devices for electrolysis of aqueous solutions of bases. A method is proposed for determining the gas content of the operating porous electrodes by the flow rate of the electrolyte. The gas content is defined as a function of the structure of the electrode and the polarizing current density. It was demonstrated that biporous electrodes with a porosity of 70-75% with a large pore diameter of $\approx 60-80$ μ and fine pores of 6-8 μ are optimal. By comparing the functions for the activity of the electrode and its gas content as a function of the porosity, the effect of the gas content and the porosity on the magnitude of the effective electrical conductivity of the electrolyte in the pores of the electrode was determined. The possibility of predicting the activity of the Ni electrode is demonstrated.

1/1

- 12 -

Electrochemistry

USSR

UDC 621.357.12.035.2

RYABUKHIN, A. G., YERSHOV, A. I., GRISHAYENKOV, B. G., GAVRILOV, B. A.

"Optimal Current Density for Decomposition of Water in an Electrolytic Cell with Porous Nickel Electrodes"

Tr. Kurgan. mashinostroit. in-ta (Works of the Kurgan Machine Building Institute), 1971, vyp. 17, pp 70-75 (from RZh-Khimiya, No 6 (II), Jun 72, Abstract No 6L258)

Translation: A study was made of the effect of the temperature on the magnitude of the dimensional D_a for electrolysis of water in a cell with porous electrodes. It was established that there is a region of optimal size D_a which expands with an increase in temperature and is limited on the one hand by the conversion of the anode from the passive state to the active state accompanied by strong corrosion and, on the other hand, by a sharp increase in the nonproductive losses.

1/1

USSR

UDC 621.357.12.035.2

CHUPRINA, V. I., FINKEL'SHTEYN, S. D., RYABUKHIN, A. G., GRISPAYENKOV, E. G., GAVRILOV, E. A.

"Mechanism of the Protective Effect of Lithium during Anode Oxidation of Porous Nickel"

Tr. Kurgan. mashinostroit. in-ta (Works of the Kurgan Machine Building Institute), 1971, Vol. 17, pp (from Elh-Khimiya, No 6 (II), Jun 72, Abstract No 6I.255)

Translation: A study was made of the mechanism of the protective effect of Li during anode oxidation of cast porous Ni-electrodes under the conditions of electrolysis of water. It is demonstrated that effective inhibition of the process of anode oxidation of the Ni arises from the formation of a thin film containing solid solutions of LiO_2, NiO on the Pb electrodes.

1/1

USSR

UDC:

BOYCHUK, M. N., GAVRILOV, B. G., and VAULIN, V. YE.

"Frequency Stability of Self-Excited Oscillators of Ultrasonic Oscillations"

Kiev, Akustika i Ul'trazvukovaya Tekhnika, No 5, 1970, pp 45-52

Abstract: The authors study the effect of the active components of transistor emittances on the frequency stability of generators. Based on the analysis of a three-point self-excited oscillator, it was shown that the effect of the active emittances of an excitation circuit on the selective circuit can be significant and must be taken into consideration in calculations. Experimental results are given which support the theoretical position. Original article: five figures, 16 formulas, and 11 bibliographic entries.

1/1

1/2   009
UNCLASSIFIED
TITLE--ALKYLATION OF METHYLCYCLOHEXANE BY PROPYLENE IN THE PRESENCE OF
PROCESSING DATE--04DEC70
PROMOTED ALUMINUM CHLORIDE IN NITROMETHANE -U-
AUTHOR-(02)-GAVRILOV, B.G., MOLCHANOVA, G.K.

COUNTRY OF INFO--USSR

SOURCE--NEFTEKHIMIYA 1970, 10(2), 183-8

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ALKYLATION, CYCLOHEXANE, PROPYLENE, ALUMINUM CHLORIDE,
CATALYST

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/0957
STEP NO--UR/0204/70/010/002/0183/0188
CIRC ACCESSION NO--AP0134675
UNCLASSIFIED

CIRC ACCESSION NO--AP0134675   UNCLASSIFIED   PROCESSING DATE--04DEC70
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TECH. ALCL SUB3 WAS MORE ACTIVE
THAN PURE ALCL SUB3. THE BEST CATALYST FOR THE TITLE ALKYLATION WAS
ALCL SUB3 PROMOTED WITH 5PERCENT FECL SUB3 IN MENO SUB2. THE OPTIMUM
RATIO OF THE REACTION MIXT. WAS 1:1:0.5:0.2 CYCLOHEXANE,C SUB3 H
SUB6,MENO SUB2,(ALCL SUB3,FECL SUB3). THE ALKLYATION YIELDED
METHYLISOPROPYLCYCLOHEXANE, METHYLPROPYLCYCLOHEXANE,
METHYLISOHEXYLCYCLOHEXANE, TRIMETHYLCYCLOHEXANE, AND DI, TRI, AND
TETRAMERS OF C SUB3 H SUB6.   FACILITY: LENINGRAD. GOS. UNIV. IM.
ZHDANOVA, LENINGRAD, USSR..

UNCLASSIFIED